STATE OF MARYLAND

DHMH

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July 30, 2010

Public Health & Emergency Preparedness Bulletin: # 2010:29
Reporting for the week ending 07/24/10 (MMWR Week #29)

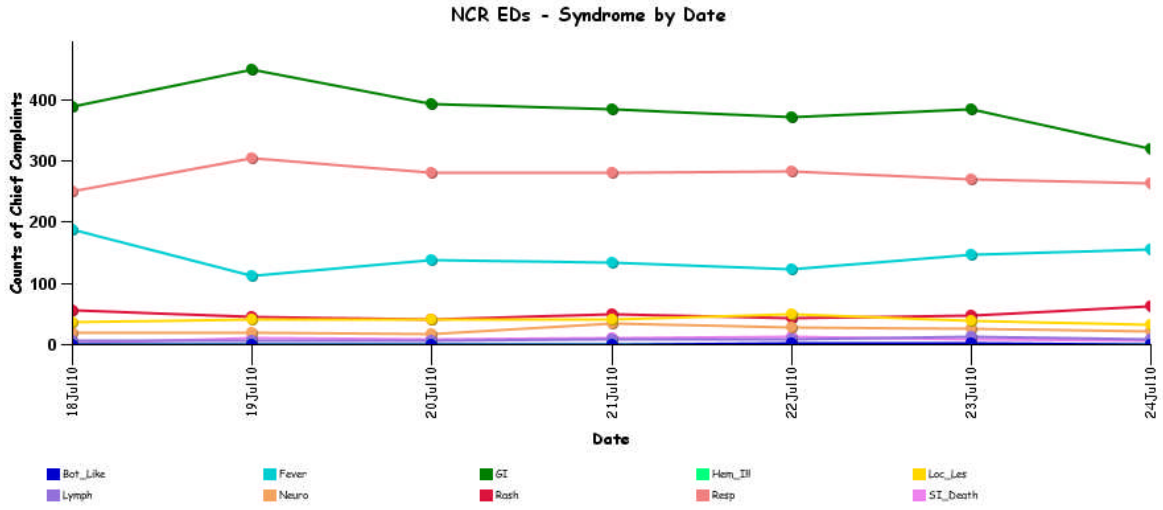
CURRENT HOMELAND SECURITY THREAT LEVELS

National: **Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)**
Maryland: **Yellow (ELEVATED)**

SYNDROMIC SURVEILLANCE REPORTS

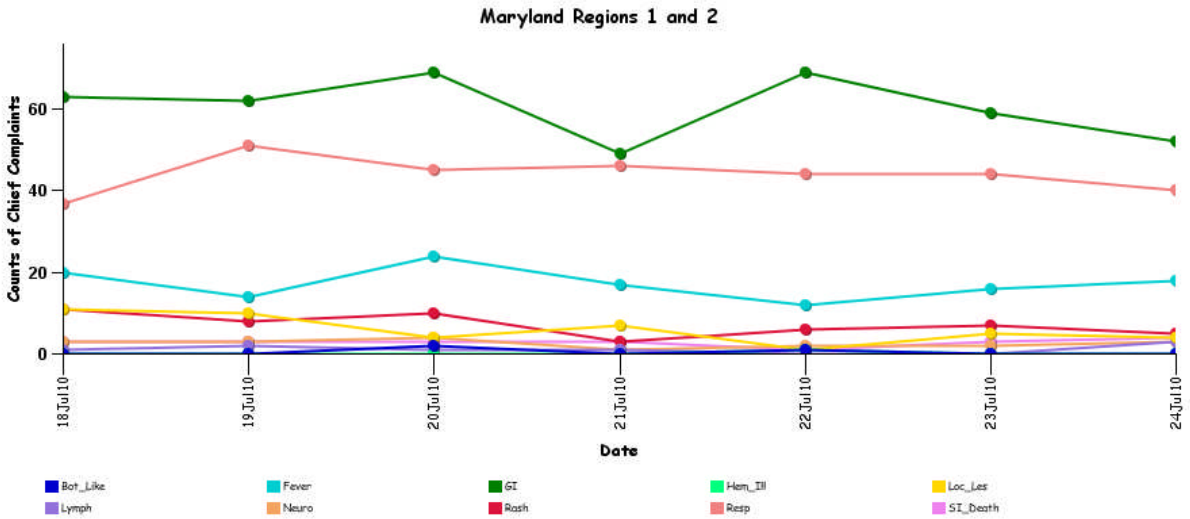
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

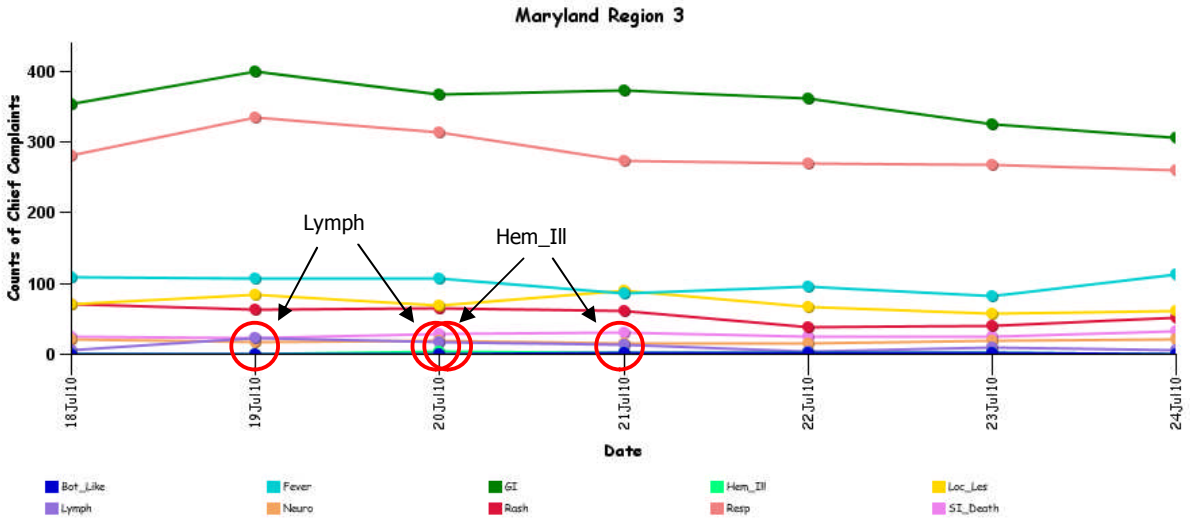


* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

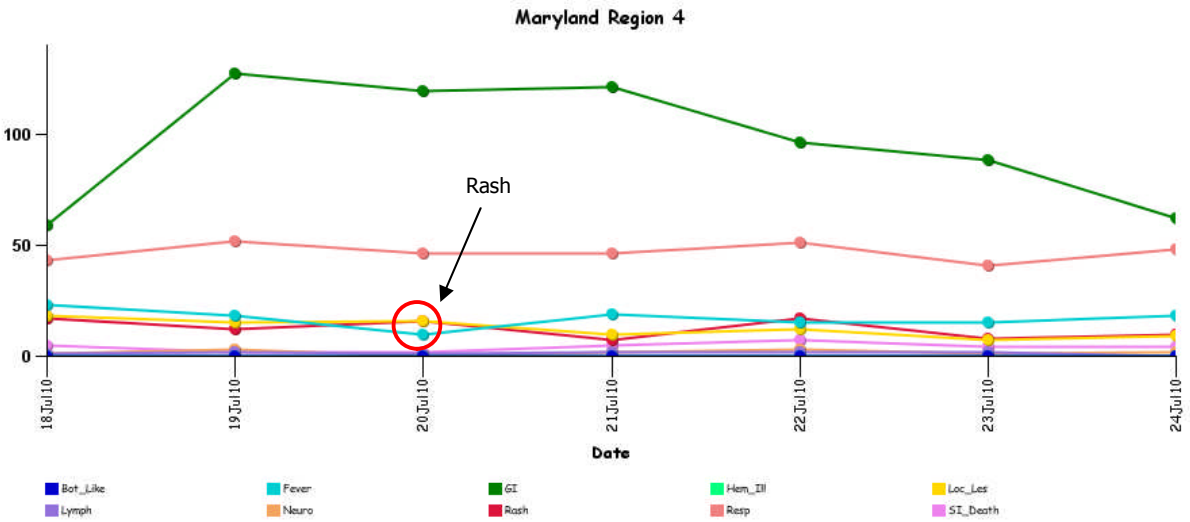
MARYLAND ESSENCE:



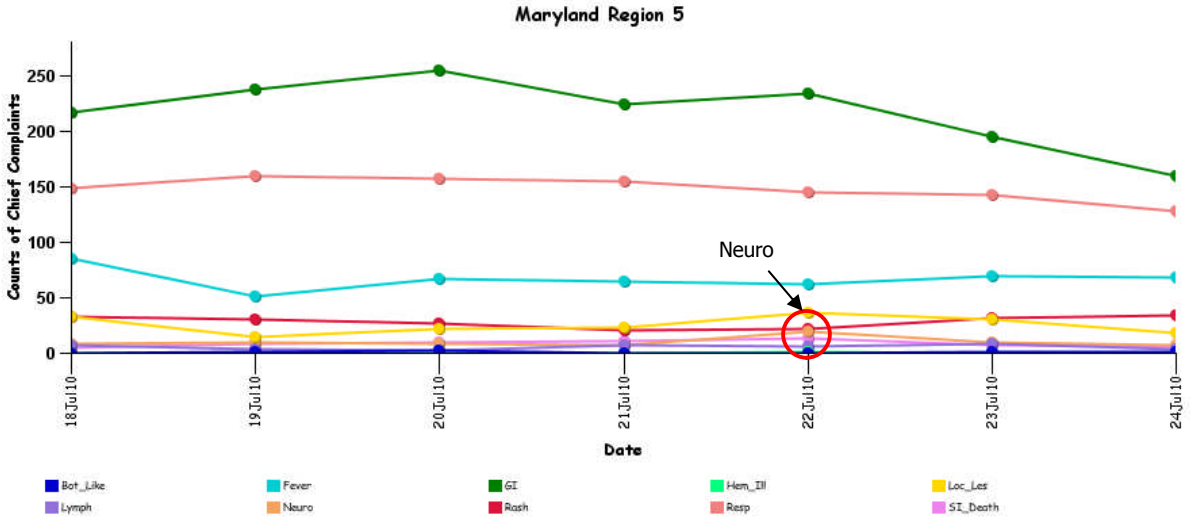
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



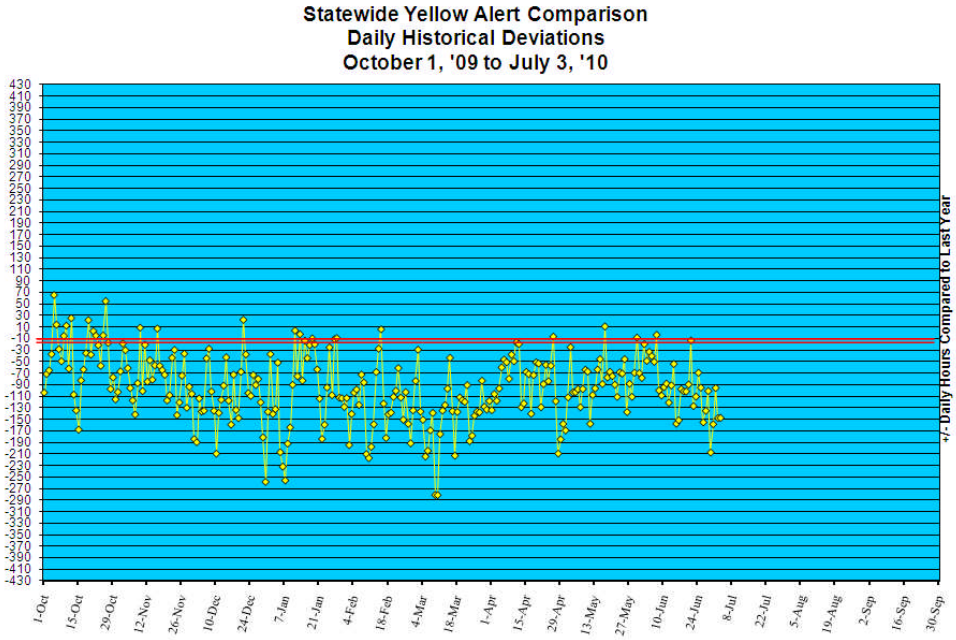
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in June 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (July 18 – July 24, 2010:	18	0
Prior cases (July 11 - July 17, 2010):	10	0
Week#28, 2009 (July 19 – July 25, 2009):	29	0

7 outbreaks were reported to DHMH during MMWR week 29 (July 18-July 24, 2010)

4 Foodborne outbreaks
2 outbreaks of GASTROENTERITIS/FOODBORNE associated with Restaurants
1 outbreaks of GASTROENTERITIS/FOODBORNE associated with a Workplace
1 outbreaks of GASTROENTERITIS/FOODBORNE associated with a Wedding

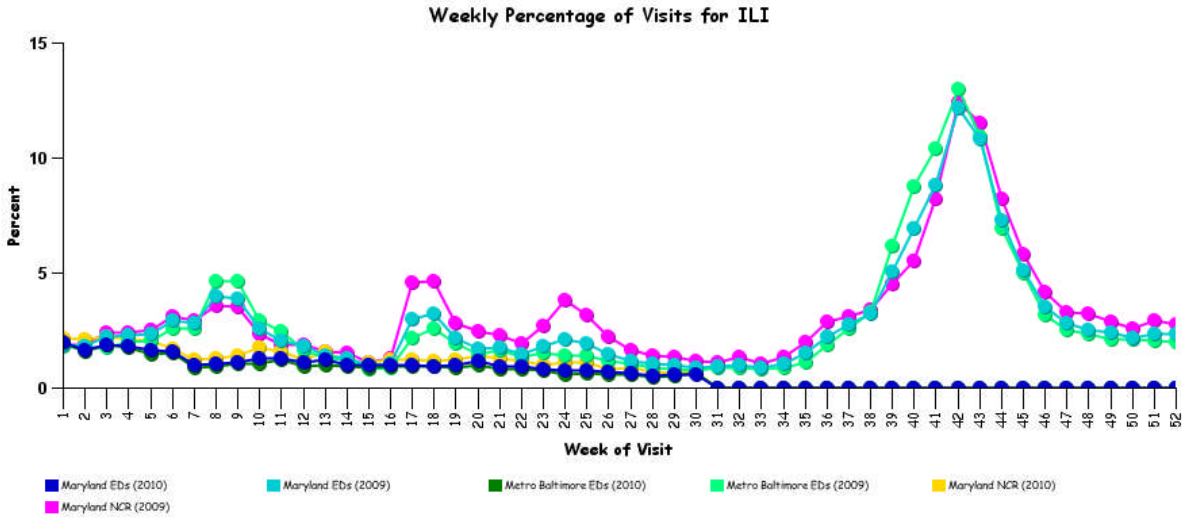
1 Respiratory illness outbreak
1 outbreak of AFRD in an Assisted Living Facility

2 Rash illness outbreaks
1 outbreak of SCABIES in a Hospital
1 outbreak of SCABIES in a Nursing Home

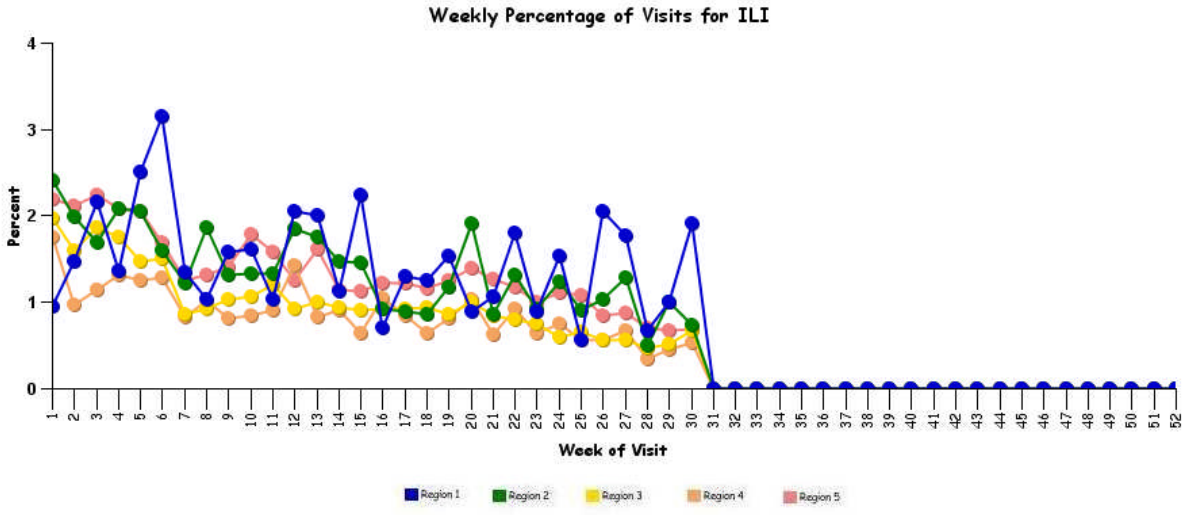
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



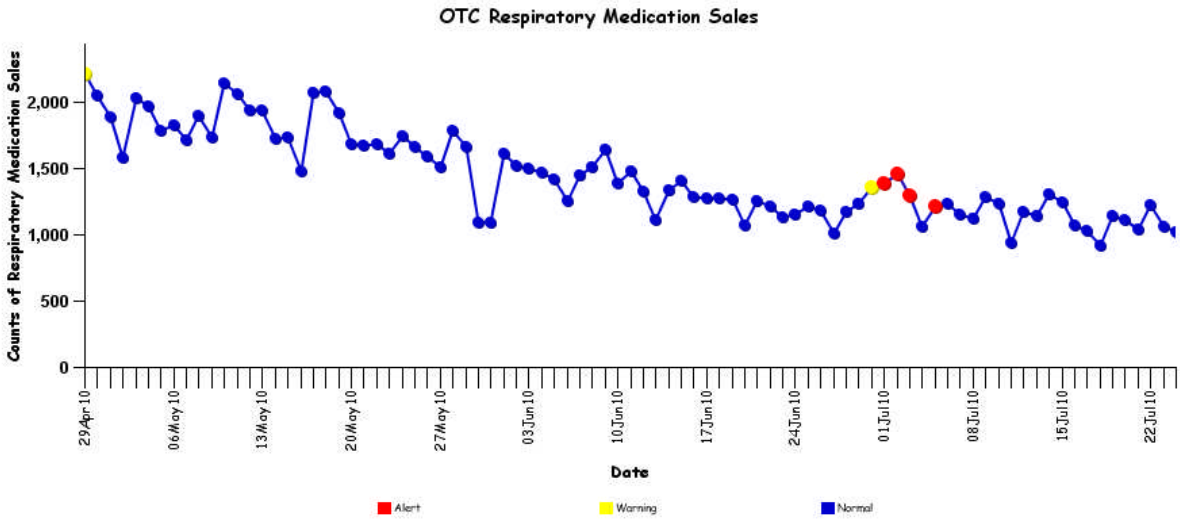
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



AVIAN INFLUENZA-RELATED REPORTS:

WHO update: The current WHO phase of pandemic alert for avian influenza is 3.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of July 22, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 501, of which 297 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1) WORLD HEALTH ORGANISATION UPDATE: 24 July 2010, As of 18 Jul 2010, worldwide more than 214 countries and overseas territories or communities have reported laboratory confirmed cases of pandemic influenza H1N1 2009, including more than 18 366 deaths. The WHO is actively monitoring the progress of the pandemic through frequent consultations with the WHO Regional Offices and member states and through monitoring of multiple sources of information.

Globally pandemic influenza activity remains low. The most active areas of influenza transmission remained in the tropical zones; primarily in West Africa, Central America, the Caribbean, and South and Southeast Asia, although activity is localized to relatively small areas in each region. In the temperate zone of the southern hemisphere, Australia and New Zealand have showed signs of increased respiratory disease in recent weeks. Both countries have continued to detect low levels of predominantly pandemic H1N1 influenza virus. In South Africa, the influenza season is well under way and is predominantly associated with seasonal influenza B and H3N2 viruses and small numbers of pandemic H1N1 influenza viruses.

In the temperate zone of the southern hemisphere, overall influenza activity remained low but with notable increases in recent weeks in some areas. South Africa had been experiencing a sharp increase in the proportion of respiratory samples testing positive for influenza viruses since late June 2010. For the current reporting week, 30-40 percent of sentinel respiratory samples from patients with severe acute respiratory infections (SARI)/influenza-like-illness (ILI) tested positive for influenza. Respiratory disease activity was associated primarily with seasonal influenza B and H3N2 viruses, with a much smaller number of pandemic H1N1 influenza viruses.

Australia has reported a gradual increase in the number of respiratory disease consultations due to ILI since end of June to early July 2010 although this similar to the levels experienced in 2008. This increase of respiratory disease activity may be accounted for in part by circulation of respiratory syncytial virus (RSV). Influenza viruses in Australia have been about 2/3 pandemic H1N1

influenza and 1/3 seasonal influenza H3N2. In New Zealand, rates of ILI have markedly increased compared to the previous reporting week but still remained below the seasonal baseline, primarily associated with pandemic H1N1 influenza virus. In Chile and Argentina, national rates of ILI remained low relative to last year at the same period of time.

In Asia, overall pandemic influenza activity remained low. The most active areas of pandemic H1N1 influenza virus transmission are in India, Cambodia and Singapore. Significant transmission of pandemic H1N1 influenza is occurring in the Southern states of Kerala and the Western state of Maharashtra, India. Cambodia has recently observed an increase in the proportion of respiratory samples testing positive for influenza virus (primarily pandemic H1N1 influenza and seasonal influenza H3N2) since early June 2010. In Singapore, rates of ILI and acute respiratory infections (ARI) increased compared to previous week and reached the epidemic threshold. The proportion of patients with ILI testing positive for pandemic H1N1 influenza continues to be stable (15 percent) associated with co-circulation of pandemic H1N1 influenza, seasonal influenza H3N2, and influenza type B viruses.

In sub-Saharan Africa, the current situation was largely unchanged since the last update. Pandemic H1N1 and seasonal influenza activity continued to be observed in several countries. Ghana has had a sustained circulation of pandemic H1N1 influenza virus since June 2010. Small numbers of seasonal influenza H3N2 viruses continued to be detected in eastern Africa.

In the tropical regions of the Americas, the situation has remained similar to the previous week. Overall pandemic and seasonal influenza activity were low, except in pockets of Central and South America with co-circulation of pandemic and seasonal influenza H3N2 viruses (Costa Rica had predominantly pandemic H1N1 influenza virus, while Nicaragua and Panama had predominantly influenza H3N2 virus).

In the temperate regions of the Northern hemisphere, pandemic and seasonal influenza viruses have been detected only sporadically or at very low levels during the past month. (Countries in temperate regions are defined as those north of the Tropic of Cancer or south of the Tropic of Capricorn, while countries in tropical regions are defined as those between these 2 latitudes.)

Resources:

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

NATIONAL DISEASE REPORTS

EASTERN EQUINE ENCEPHALITIS (FLORIDA): 23 July 2010, A Hillsborough woman has died of a rare, mosquito-borne disease that causes inflammation of the brain. Hillsborough health officials on Tuesday [20 Jul 2010] announced the state's 1st death from eastern equine encephalitis [EEE] since 2008. Only 5-10 cases each year are reported nationally. In recent weeks, 4 horses in Hillsborough have tested positive for EEE, health officials said, increasing the potential for people to get infected. The disease is transmitted by a mosquito bite. Symptoms can begin 4-10 days after the bite of an infected mosquito. They include sudden headache, high fever, chills, and vomiting. The disease can progress into disorientation, seizures, and coma. There is no treatment specifically for an EEE [virus] infection. About a third of patients will die, and many of those who survive have brain damage, the Health Department noted. "This tragic loss of life is a reminder that as we move through the summer months, we must all be aware of how we can protect ourselves from mosquito-borne diseases," Dr Douglas Holt, director of the Hillsborough County Health Department, said in a statement. Health officials declined to release additional information about the woman, who lived in northern Hillsborough County and died on 1 Jul [2010]. Early this morning [21 Jul 2010], Hillsborough County's mosquito control department plans to spray pesticide by air in the North Tampa area, as it does regularly around the county during the summer rainy season. The mosquito population is closely tied to weather patterns. When Hillsborough sees more water, it can expect greater mosquito activity, said Hillsborough County spokesman Willie Puz. To protect yourself, health officials recommend the following:
- Avoid being outdoors at dusk and dawn.
- Wear clothing that covers your skin.
- Use mosquito repellents containing DEET (N, N-diethyl-meta-toluamide, or N, N-diethyl-3-methylbenzamide). Picaridin and oil of lemon eucalyptus are other options.
- Check the drainage around your home. Get rid of standing water where mosquitoes can lay their eggs.
(Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

TULAREMIA, ANIMAL (COLORADO): 18 July 2010, A cat in Pueblo West tested positive for tularemia, a potentially serious illness that can be passed on to humans. The Health Department said the cat was an indoor/outdoor cat, and officials are working with the cat's owners regarding medical concerns. Tularemia is a potentially serious illness caused by a bacteria found in animals, especially rodents, rabbits, and prairie dogs. Health officials said the illness can be passed on to humans in a variety of ways including: being bitten by an infected tick, deerfly, or other insect; handling infected animal carcasses; eating or drinking contaminated food or water; breathing in the bacteria. Tularemia can be fatal if it is not treated with the right antibiotics. Health officials said the best way to keep your pets safe is to not let them roam or eat dead animals and to keep an eye on their health. (Tularemia is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

JAPANESE ENCEPHALITIS AND OTHER (INDIA): 23 July 2010, Health authorities in Meghalaya today sounded an alert following reports of 2 people being infected with Japanese encephalitis [JE] [virus], officials said. The mosquito-borne disease had been reported from Ri-Bhoi and West Khasi Hills districts in Eastern part of Meghalaya, a senior health official said. "Both the patients infected with Japanese encephalitis [virus] are undergoing treatment in 2 city hospitals here," Director of Health Services AS Kynjing told UNI. He said instructions have been given to hospitals to collect blood samples from all suspected patients, including malaria patients, in order to confirm the disease. Dr Kynjing said a team of doctors have rushed to Langja village in the state's West Khasi district to ascertain the outbreak of Japanese encephalitis in the valley areas. The disease [virus], transmitted from pigs [and wild birds - Mod.TY] through mosquitoes, strikes during the period of April to September. Encephalitis causes inflammation of the brain tissue, producing symptoms of high fever, headache, rigidity of the neck, and loss of voice and involuntary movement of the body.

YELLOW FEVER (DEMOCRATIC REPUBLIC OF CONGO): On 19 July 2010, Medecins sans Frontieres (MSF) reported a suspected case of yellow fever [YF] in Titule, Base Ouele district of Orientale province (northern part of the country). Between March and June 2010, 11 other suspected cases were reported, including 2 deaths. The index case was identified as a 43-year-old male farmer who presented with clinical symptoms of fever, jaundice and haematuria (blood in urine). The onset date of his illness was 15 Mar 2010, and he died a few days later. He had no history of yellow fever vaccination. Laboratory tests conducted by the Institut National de Recherche Medicale (INRB) in Kinshasa showed IgM positive by ELISA test and was confirmed by the regional reference laboratory for yellow fever at the Institut Pasteur in Dakar, Senegal with more specific tests (plaque reduction neutralization test or PRNT). Following identification of the index case (the 43-year-old male), an investigation is being conducted in the town, inhabited by some 17,000 people, for the purpose of determining the scope of the outbreak response and to prepare for emergency vaccination. The Democratic Republic of Congo (DRC) is among Africa's yellow fever endemic countries and, in 2003, introduced yellow fever vaccine in the Expanded Programme on Immunization (EPI) for all children at 9 months of age. The DRC has not yet benefited from preventive vaccination campaigns. (Viral Hemorrhagic Fever is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

TICK-BORNE ENCEPHALITIS (RUSSIA): 19 July 2010, Rospotrebnadzor [Federal Service for Consumer Affairs and Human Welfare] office in Primorsky Krai [territory] has given details of 2 fatal cases of tick-borne encephalitis (TBE). Both victims were unemployed men who went into forested areas in search of wild berries. Last year [2009] there were 7 fatal TBE cases in the Primorsky Krai. This year [202], 4833 people, including 1005 children, have experienced tick bites. In total 3202 ticks were tested for carriage of TBE virus. In 255 cases of TBE virus infection immune globulin was administered, and 68 people were hospitalized because of suspected TBE (15 of whom were children). In 13 cases (of whom 4 were children) a diagnosis of TBE was confirmed by laboratory analysis. TBE vaccine coverage was 76 percent of those individuals judged to be at high risk of infection, representing 5 percent (46 499 people) of the total population.
(Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

JAPANESE ENCEPHALITIS (NEPAL): 18 July 2010, A minor [child] died of Japanese encephalitis [JE] in Mahottari on Friday [16 Jul 2010]. The deceased has been identified as 5-year-old boy of Dhamaura VDC-1. He died while undergoing treatment in BP Koirala Institute of Health and Sciences, Dharan. He had been getting treatment in the hospital on special supervision for 4 days, according to the deceased's family source. Similarly, a 20-year-old young woman has also been suffering from the disease in the same village, according to local Rehan Shah.
(Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

CRIMEAN-CONGO HEMMORHAGIC FEVER (RUSSIA): 18 July 2010, The epidemic season for Crimean-Congo hemorrhagic fever (CCHF) continues in the Stavropol oblast. The cumulative number of cases was 25 in the oblast this year [2010] so far. The 1st case was a man who removed ticks from cattle with his bare hands and crushed them. According to Rospotrebnadzor (the Federal Agency for Consumer Protection and Welfare), CCHF cases were recorded in 11 regions [rayons] of the Stavropol oblast. Most cases occurred in the Ipatovski and Neftekumski regions. There have been 8000 reports of tick bites. A survey revealed that only 5 percent of ticks were CCHF virus carriers, but this is a significantly greater number than recorded in 2009.

PLAGUE, PNEUMONIC (PERU): 18 July 2010, An outbreak of pneumonic plague, a virulent disease with a high mortality rate, was detected in Trujillo. Doctors are striving to save the lives of 3 patients, including a resident doctor and a medical student whose health conditions are serious. According to the regional manager of Health, Victor Peralta Chavez, this is the 1st time this disease has been recorded in the country. A woman aged 29, from Mariposa Leyva sector, district Chocope (Ascope), 40 minutes north of Trijillo, contracted the disease. The 1st symptoms occurred 5 days prior to her family taking her to Trujillo, where she was admitted at the Regional Teaching Hospital. With a picture of severe pneumonia (high fever, abdominal pain, shortness of breath and other symptoms), the patient was treated for both pneumonia and for potential influenza A (H1N1) (with antibiotics and antivirals), but there was no improvement. The results of a quick test [direct fluorescent antibody stain of sputum? - Mod.LL] to detect possible pneumonic plague were negative. A 32-year-old resident doctor, who treated and intubated the patient during her critical condition, developed the same symptoms as the infected woman. He was immediately hospitalized and treated, but his health is critical. In this regard, Peralta Chavez said that the patient's progress is not good. "This has caused multiple organ failure, i.e. many of [his] vital organs do not work or [have] stopped working properly. The patient is in hospital intensive care at Victor Lazarte Echegaray," he said. Also, last Tuesday [13 Jul 2010], a 4th-year student of Human Medicine at the Universidad Nacional de Trujillo (UNT), who also had contact with the infected woman, was hospitalized at the Regional Teaching Hospital. This patient took a rapid test and tested positive for pneumonic plague. His condition is also very delicate, Chavez said. With these results, Peralta Chavez summoned the press and warned of a possible outbreak of pneumonic plague at the hospital or in the Trujillo Regional Teaching Hospital,

although he clarified that this is an imported case from Chocope, an area where plague spreads silently and is very dangerous. (Plague is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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